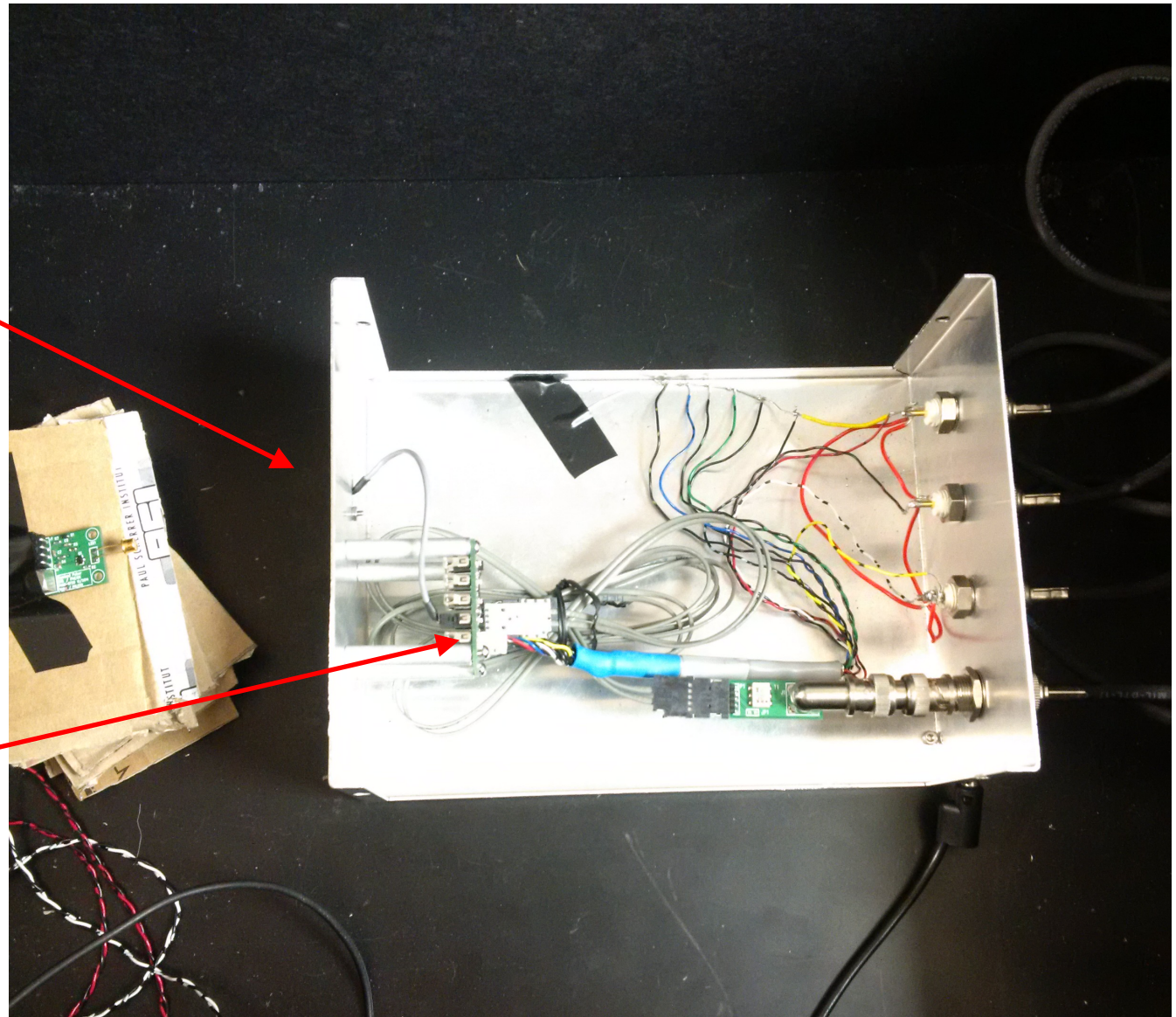
Michigan SiPM Testing

Joe Osborn for the UMich group

Christine Aidala, Mike Skoby, Joe Osborn

UMich Test Stand Setup



Single mounted SiPM

LED Pulser

sPHENIX PreAmp Board

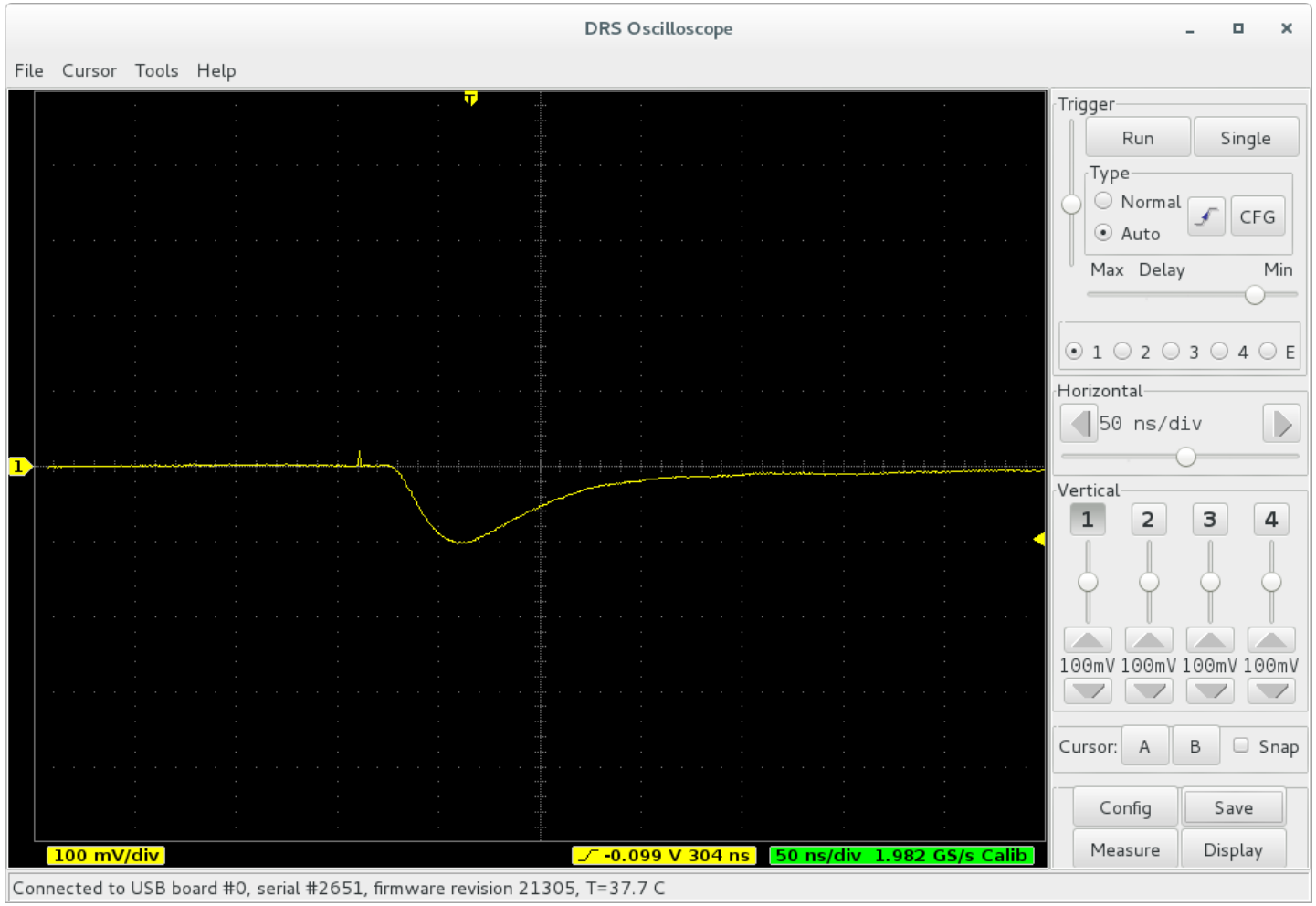
Power supply inputs

Output to DRS4 Readout

Capabilities

- Using PreAmp boards from BNL
- Working with Martin's RCDAQ readout and pmonitor analysis software
- Can test 1 mounted SiPM at a time
- Pulsing LED provides signal

Oscilloscope Signal



Pros/cons

Benefits

- Can quickly replace single SiPMs – just plug them into the PreAmp board
- We have a nice power supply - quickly changes voltages with high precision

Drawbacks

- Only can test single SiPMs
- Still working on a problem – we only measure one photon peak (as seen in previous slide, only 1 peak)
  - For this reason we can quickly plot the IV curve but not the 1/2/3 photon (etc.) peaks to get the gain

Work Force For Testing This Summer for the Prototype

- Mike Skoby (Post doc)
- Joe Osborn (Grad student)
- Might have an undergrad Nick Melekian if we can find money to pay him
- ??????